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ning of each regular issue of the PCT Gazette.*

(54) Title: **USE OF A SRI AND VITAMIN B6 FOR THE TREATMENT OF NEUROLOGICAL AND MENTAL DISORDERS**

(57) **Abstract:** The present invention is concerned with a method of treating neurological and/or mental disorders that are associated with, or pathogenetically related to deficient serotonin neurotransmission. More particularly the invention relates to a method of treating depressive disorders, anxiety disorders, post-traumatic stress syndrome or premenstrual syndrome, said method comprising the administration of serotonin re-uptake inhibitor (SRI) in a daily amount of at least 0.4 mg, wherein a vitamin B6 component is co-administered in a daily amount of between 0.01 and 10 mmoles to improve the responder rate or to advance the onset of action of the treatment with SRI, and wherein the method does not include the application to the brain of an AC pulsed magnetic field of at least 7.5 picotesia flux density for at least 15 minutes. The invention also encompasses pharmaceutical formulations containing SRI and vitamin B6 component and comprising a dosage unit that provides a sustained release of the vitamin B6 component.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 596 807 A (CROSBY MARTIN G) 24 June 1986 (1986-06-24) cited in the application * col 3, 9-21, 31-54; col 8, lines 19-26, example 3; claims *	1-17
X	US 2002/072537 A1 (HINZ MARTIN C) 13 June 2002 (2002-06-13) cited in the application * paragraphs 28, 38, 40, 41, 49; claims 5, 8, 13, 16, 23-25 *	1-17
A	US 5 885 976 A (SANDYK REUVEN) 23 March 1999 (1999-03-23) cited in the application * col 1, lines 18-37; col 11, lines 18-33; col 12, lines 52-65; col 13, lines 29-32 *	1-17
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	EP 1 266 659 A (PANTARHEI BIOSCIENCE B V) 18 December 2002 (2002-12-18) * claim 7 *	13-17
X	CLINICAL CAREGROUP: "Selective serotonin reuptake inhibitors (SSRI)" ONLINE, XP002178577 Retrieved from the Internet: <URL:clinical.caregroup.org/a...actions/Dr ug_Classes/SSRI's.htm> 'retrieved on 2001-09-21! * pages 1-2 *	1-17
A	ERIKSSON E ET AL: "DIAGNOSIS AND TREATMENT OF PREMENSTRUAL DYSPHORIA" JOURNAL OF CLINICAL PSYCHIATRY, XX, XX, vol. 63, no. SUPPL 7, 2002, pages 16-23, XP008006875 ISSN: 0160-6689 * page 19, last paragraph *	1

INTERNATIONAL SEARCH REPORT

PCT/NL 03/00622

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4596807	A	24-06-1986	AT 113837 T	15-11-1994
			AU 586859 B2	27-07-1989
			AU 5621586 A	23-10-1986
			CA 1262095 A1	03-10-1989
			DE 3650138 D1	15-12-1994
			DK 551586 A	18-11-1986
			EP 0222782 A1	27-05-1987
			ES 8800045 A1	01-01-1988
			GR 860762 A1	21-07-1986
			NO 864762 A	26-11-1986
			PT 82268 A , B	01-04-1986
			WO 8605684 A1	09-10-1986
			US 4698342 A	06-10-1987
			JP 62502798 T	12-11-1987
US 2002072537	A1	13-06-2002	US 6403657 B1	11-06-2002
			US 2002040054 A1	04-04-2002
			US 2002025972 A1	28-02-2002
			US 2002065311 A1	30-05-2002
			US 2002094969 A1	18-07-2002
US 5885976	A	23-03-1999	US 5691324 A	25-11-1997
			WO 9913884 A1	25-03-1999
			AU 4486797 A	05-04-1999
			US 5470846 A	28-11-1995
			US 5691325 A	25-11-1997
EP 1266659	A	18-12-2002	EP 1266659 A1	18-12-2002
			WO 02100404 A2	19-12-2002